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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,301	01/23/2002	James G. Sheek	27475/07001	7562
24024	7590	09/09/2004	EXAMINER	
CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114			ZIMMERMAN, JOHN J	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,301

Applicant(s)

SHEEK ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/13/04 (RCE).
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-16 and 18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-16 and 18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date, _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

THIRD OFFICE ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 13, 2004 has been entered.

Amendments

2. This Office Action is in response to the Amendment received August 13, 2004. Claims 1, 3-16 and 18 are pending in this application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-14 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Applicant has amended independent claim 1 to recite an exterior first composition comprising "purely" metal (e.g. claim 1, line 3). In applicant's response to the previous Office Action, applicant appears to argue that this limitation excludes metal compounded with oxygen from this exterior first composition. Applicant's arguments are at odds with the applicant's use of the term "comprising" since "comprising" has been defined by the courts to allow for any additional unspecified constituents in a composition - even in major amounts, *Ex parte Davis et al.*, 80 U.S.P.Q. 448 (PTO Bd. App. 1948). The examiner notes that aluminum oxide is pure aluminum metal that is compounded with oxygen. As long as the term "comprising" is used, there can be additional constituents besides pure metal in the layer. Contrary to applicant's statements, the claim language does not prohibit additional constituents from being compounded with the pure metal of the layer. The current claim language only requires that pure metal be present in the layer. In view of the noted possible discrepancies in claim interpretation caused by applicant's claim language "comprising purely metal", the claims are considered indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 1, 8, 10-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Naik (U.S. Patent 4,919,773).

8. Naik discloses an article having a graded/transitioned layer from a layer of a metal to a hard outer layer compound of the metal, e.g. boride, carbide, nitride or oxide of a Group III to Group VI metal, (e.g. see paragraph spanning columns 6 and 7). A metallic interlayer, e.g. palladium, platinum, nickel, chromium, etc. . . , can used (e.g. see column 5, lines 17-40). Various deposition processes may be used (e.g. see column 5, line 41 - column 6, line 34; CVD, PVD, etc. . .). Regarding the limitation in the claims that article must have a substantially transparent transition layer superimposed on a metal color bearing layer, Naik clearly provides for a transition layer culminating in a hard outer layer of aluminum oxide (see example 4 in the table in column 7). Aluminum oxide is substantially transparent and colorless to visible light. The rejected claims recite that the exterior first composition is a composition "comprising a metal" and since aluminum oxide comprises aluminum, Naik meets the limitations of the rejected claims. The term "comprising" allows for any additional unspecified constituents in a composition - even in major amounts, *Ex parte Davis et al.*, 80 U.S.P.Q. 448 (PTO Bd. App. 1948).

9. Claims 1, 3-4, 7-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Randhawa (U.S. Patent 5,037,517).

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10. Randhawa discloses an article having a transparent layer of about 25-50 angstroms and two graded/transitioned layers (e.g. see Figure 3; claims 1-9; column 3, line 67 - column 4, line 44). One composition can be gold and another layer can be zirconium and/or zirconium carbonitride (e.g. see Table I). Although it is noted that applicant discloses that the first composition is exterior, Randhawa clearly discloses that the gold outer layer (10) will wear away and expose the transparent layer (16) which in turn will allow for the color layer (14) to show through (e.g. see column 3, line 67 - column 4, line 11). The examiner also notes that since the layered article of Randhawa is made in sequential coating steps, the intermediate article of Randhawa before the final gold coating step would anticipate the claimed article. Nontransitory intermediate articles in the prior art are actual physical articles that exist during production and therefore they can be used to reject claims. Thus, the transparent layer (16) of Randhawa will be the exterior layer after wearing of the initial gold outer layer and also during the manufacture of the article.

Allowable Subject Matter

11. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to overcome the rejection under 35 USC 112, second paragraph. The prior art does not disclose or make obvious the use of the claimed first compositions of these claims in the manner described in independent claim 1. Allowable subject matter having been indicated, applicant should submit formal drawings at this time.

Response to Arguments

12. Applicant's amendments and arguments filed August 13, 2004 have been fully considered and have removed most of the previously presented rejections. The amendments and arguments, however, are not persuasive with regards to the remaining rejections.

13. Claims 1, 3-14 and 18 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended independent claim 1 to recite an exterior first composition comprising "purely" metal (e.g. claim 1, line 3). In applicant's response to the previous Office Action, applicant appears to argue that this limitation excludes metal compounded with oxygen from this exterior first composition. Applicant's arguments are at odds with the applicant's use of the term "comprising" since "comprising" has been defined by the courts to allow for any additional unspecified constituents in a composition - even in major amounts, *Ex parte Davis et al.*, 80 U.S.P.Q. 448 (PTO Bd. App. 1948). The examiner notes that aluminum oxide is a combination of pure aluminum metal that is compounded with oxygen. As long as the term "comprising" is used, there can be additional constituents besides pure metal in the layer. Contrary to applicant's statements, the claim language does not prohibit additional constituents from being compounded with the pure metal of the layer. The current claim language only requires that pure metal be present in the layer. In view of the noted possible discrepancies in claim interpretation caused by applicant's claim language "comprising purely metal", the claims are considered indefinite. The limitations of the claims must be given their broadest reasonable interpretation and applicant's use of "comprising" allows for an

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interpretation considerably broader than the interpretation presented in applicant's arguments. In order for applicant's arguments to be commensurate with the current claim language, it is suggested that applicant delete the term "comprising". Regarding claims 15-16, it is not clear how applicant believes these claims distinguish over Naik since no recitation of "purely metal" is found in these claims and applicant has not specifically discussed how the claim limitations of these claims differ from Naik. The examiner notes that metal oxides are "metal bearing" materials.

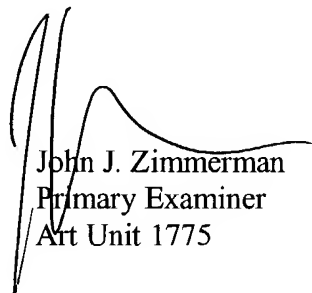
14. Regarding the rejection of claims under 35 U.S.C. 102(b) as being anticipated by Randhawa (U.S. Patent 5,037,517), applicant argues that neither transition zone 17 nor transition zone 19 of Randhawa has an exterior first composition and is superimposed on a metal bearing color layer. The examiner again notes, however, that Randhawa clearly discloses that the gold outer layer (10) will wear away and expose the transparent layer (16) which in turn will allow for the color layer (14) to show through (e.g. see column 3, line 67 - column 4, line 11). Both graded layer 19 and graded layer 17 of Randhawa are thin transparent layers wherein the exterior most composition of the graded layer is a metal. Both layers are superimposed on the color layer 14. The term "superimposed" merely means that the layer occurs over or above another layer (e.g. see Webster's New Collegiate Dictionary, 1977) and both the graded layers 19 and 17 are clearly over or above the color layer 14.

Conclusion

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
September 3, 2004